

WHAT IS CLAIMED IS:

1 1. A code division multiple access communication system in
2 which a base station transmits data in which an individual channel
3 being individual user data and a common pilot channel in which
4 all symbols that are known are mixed to a mobile station so that
5 said mobile station may use at least one of said individual channel
6 and said common pilot channel to thereby carry out channel
7 estimation in order to restore a phase change in data transmitted
8 from said base station;

9 wherein said mobile station comprising a first means for
10 carrying out said channel estimation using said common pilot
11 channel, when said mobile station is near said base station and,
12 if said mobile station is far away from said base station, for
13 carrying out said channel estimation using a pilot symbol of said
14 individual channel.

1 2. The code division multiple access communication system
2 according to Claim 1, further comprising a second means for
3 comparing respective power values of post-reverse diffusion data
4 items of said common pilot channel and said individual channel
5 so that either one of said post-reverse diffusion data items of
6 said common pilot channel and said individual channel that has
7 a larger one of said power values may be used to carry out said
8 channel estimation.

1 3. The code division multiple access communication system
2 according to Claim 2, further comprising:

3 a third means for generating common pilot data using a

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4 received signal and a common pilot channel-use reverse diffusion
5 code;

6 a fourth means for generating individual channel data using
7 said received signal and an individual channel-use reverse
8 diffusion code; and

9 a fifth means for converting said common pilot data and said
10 individual channel data into respective power values,

11 wherein said power values thus converted are compared with
12 each other to thereby determine said data having either one of
13 said power values which is larger than the other.

1 4. A channel estimating method for a code division multiple
2 access communication system by which a base station transmits data
3 in which an individual channel being individual user data and a
4 common pilot channel in which all symbols that are known are mixed
5 to a mobile station so that said mobile station may use at least
6 one of said individual channel and said common pilot channel to
7 thereby carry out channel estimation in order to restore a phase
8 change in data transmitted from said base station, wherein said
9 mobile station carries out said channel estimation using said
10 common pilot channel when said mobile station is near said base
11 station and, if said mobile station is far away from said base
12 station, carries out said channel estimation using a pilot symbol
13 of said individual channel.

1 5. The channel estimating method according to Claim 4,
2 wherein respective power values of post-reverse diffusion data
3 items of said common pilot channel and said individual channel
4 are compared with each other so that either one of said post-

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5 reverse diffusion data items of said common pilot channel and said
6 individual channel that has a larger one of said power values may
7 be used to thereby carry out said channel estimation.

1 6. The channel estimating method according to Claim 5,
2 comprising the steps of:

3 generating common pilot data using a received signal and a
4 common pilot channel-use reverse diffusion code;

5 generating individual channel data using said received
6 signal and an individual channel-use reverse diffusion code;

7 converting said common pilot data and said individual
8 channel data into respective power values; and

9 comparing said power values thus converted with each other
10 to thereby determine either one of said common pilot data and said
11 individual channel data that has a larger one of said power values.

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